Introduction:
Youth Risk Behavior Surveillance

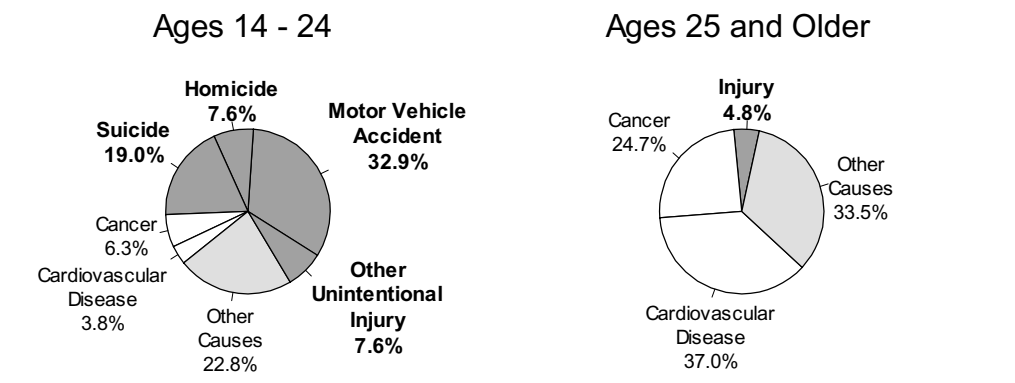
The Youth Risk Behavior Surveillance System

This report presents a comprehensive analysis of trends in youth risk behaviors in Lancaster County, as measured by the Youth Risk Behavior Survey (YRBS) administered in 1991, 1993, 1995, 1997 and 1999. Our report covers five areas of health risk behavior: unintentional and intentional injuries, tobacco use, alcohol and other drug use, sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, and physical activity.

This report, and the research data it is based on, was facilitated by the existence of a national Youth Risk Behavior Surveillance System (YRBSS). The national YRBS was first implemented in 1990 to measure prevalence among young people of behaviors that put their health at risk. The YRBSS is a coordinated system using a standardized survey tool and sampling methods reproduced in the majority of states and many localities across the United States.

Before the establishment of the YRBSS, there was little information on the prevalence of these important risk behaviors among youth in the United States.[1] Yet these areas of risk behavior are arguably the major precursors to death, illness and disability among Americans, not only in their teen years, but also later in adult life. Injuries alone account for the majority of deaths among youth and young adults under 25 -- in Lancaster County, motor vehicle crashes, other unintentional injuries, homicide and suicide accounted for 67% of all deaths to those 14 to 24 years of age *(see figure below)*. And although cardiovascular disease and cancer are the major killers of adults *(see figure)*, the majority of risk behaviors for these diseases are initiated during adolescence. Unintended teen pregnancy and sexually transmitted disease infection acquired in the teen years cause additional illness and death among youth, young adults, and their children.[2]

Causes of Death in Lancaster County
Years 1994 - 1998



Source: Lancaster County Vital Statistics, 1994 - 1998

The several purposes of Youth Risk Behavior Surveillance are to:

- Determine the prevalence and age of initiation of health-risk behaviors among teens
- Assess whether health-risk behaviors increase, decrease, or remain the same over time
- Allow researchers to examine the occurrence of risk behaviors among young people
- Provide comparable national, state and local data
- Monitor progress toward achieving Healthy People objectives and education goals[1]

Introduction: Youth Risk Behavior Surveillance

The Youth Risk Behavior Survey is an important surveillance, policy, and program management tool for communities, states, and the nation. YRBS data provide quantifiable evidence of serious health risks among youth which demand public attention and public health action. As such, the data are useful in raising public awareness of the extent of youth risk behaviors. YRBS data are tools for policy, helping to identify public health priorities and support the need for health education and other prevention efforts for children and youth. The YRBS is also a tools for prevention and intervention programs -- the data is instrumental in setting program goals and objectives, monitoring the progress and outcomes of public health and other community action, and implementing or modifying public health programs to address the behaviors of young people in priority issue areas.[3]

Data Collection and Analysis

Local data collection was made possible by the cooperation of Nebraska health officials coordinating the state YRBS, as well as the Nebraska YRBS contractor, the Buffalo Beach Company. The Lincoln-Lancaster County Health Department separately contracted with this company to obtain an "over-sample" of the Lancaster County portion of the state survey. This provides the additional sample size needed to obtain valid county-level statistics.

The Youth Risk Behavior Survey measures the prevalence of health-risk behaviors among adolescents through representative national, state, and local surveys conducted biennially. The national and state surveys use multi-stage cluster sampling to obtain samples of students in grades 9-12 reflecting the geographic, urban-rural, racial, gender, and grade makeup of the population in those grade levels. In Lancaster County, the great majority of public schools (urban and rural schools) have participated every year, with 100% participation in most years. The survey was conducted in randomly selected classrooms of a required period (second or third period). Parental consent was required beginning in 1997. This disrupted the results to some degree, but was carefully considered in the analysis of trends.

This report presents the following types of results from the analysis of YRBS data (1991-1999):

- Trend in behaviors from 1991 to 1999 (increases, decreases or unchanged level)
- Trends and differences among males and females
- Trends and differences among different grade levels
- Trends and differences by white or non-white status. YRBS sample sizes for major race/ethnic groups (Black, Hispanic, American Indian or Asian) were not large enough to reliably compare these groups or examine trends over time. However, selected comparisons were feasible between white students and those who may be classified as "nonwhite" -- of minority race or Hispanic ethnicity.

Any statements made in this report about Lancaster County youth risk behaviors, whether changes over time or differences between groups, were based on review of statistically significant differences or changes (at a 95% confidence level) and a critical evaluation of consistent data trends. Our goal is to avoid misleading or invalid data comparisons while presenting the maximum in public health data to meet the wide variety of citizen information needs.

All statistics presented are "grade-adjusted" numbers (with the exception of data by grade). This was necessary because of large variations from year to year in the proportion of students in each grade that were surveyed (see Sample Demographics section). Because there are often substantial behavioral differences between students in younger and older grades, these differences in grade composition of

the sample from year to year interfered with valid comparison of behaviors between years or demographic groups. Data were therefore "grade-adjusted" to a common grade distribution (1991 Lincoln Public Schools enrollment), so that we are comparing "apples to apples", as it were.

The "grade adjustment" did not affect trend directions, comparisons of males to females or of white to nonwhite students, or overall conclusions from the data. But the procedure did remove bias due to this particular sampling problem, and often helped to smooth out unstable data trends over time.

Public Health Discussion

The efficacy of any health education program is closely linked to the public's perception of the risk. Music, movies and mass media frequently convey an impression of acceptance to high risk activities such as alcohol and drugs, tobacco, and sexual experimentation. These same sources of influence also give many negative impressions of physical activity and bodyweight to youth who are less than perfect. In most cases, the impression is that these behaviors are accepted across the world, creating tolerance levels which are counter productive to carefully planned health education programs.

A Public Health Discussion follows the interpretation of data for each of the risk factors within the Youth Risk Behavior Survey. The discussion looks at the risk from a public health view, not to repeat local findings, but to help the reader vision a safe and healthy community for youth to grow and mature. The discussion identifies roles and responsibilities for parents, the community and policy makers, those charged with providing safe and healthy environments for youth. The discussion attempts to identify growing youth needs through the risks measured. Some of the discussions are suggested actions, while others need a caring community of parents, community leaders and policy makers working in collaboration to find solutions.

Information sources to the discussion have been provided by Center for Disease Control, Healthy People 2010, and community agencies focused on the risks measured in the survey.

One thing is certain, adults must be willing to get involved in the challenges facing youth, or if left alone with todays music, movies and mass media, youth will mature with a set of values much different than those held important by parents, the community and policy makers.

1 Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health. "Assessing Health Risk Behaviors Among Young People: Youth Risk Behavior Surveillance System At-a-Glance 2000. <http://www.cdc.gov/nccdphp/dash/yrbs/yrbsaag.htm>

2 CDC. "Youth Risk Behavior Surveillance – United States, 1997." *Morbidity and Mortality Weekly Report, Surveillance Summary,* August 14, 1998. Vol. 47 (SS-3).

3 Modified from "Assessing Health Risk Behaviors ..." (Note 1).